

***Generation Interconnection  
Combined  
Feasibility/System Impact Study Report***

***For***

***PJM Generation Interconnection Request  
Queue Position W4-090***

***Vineland 12kV 2***

May 2011

## **Preface**

The intent of the Combined Feasibility/ System Impact Study is to determine a plan, with approximate cost and construction time estimates, to connect the subject generation interconnection project to the PJM network at a location specified by the Interconnection Customer. As a requirement for interconnection, the Interconnection Customer may be responsible for the cost of constructing: Network Upgrades, which are facility additions, or upgrades to existing facilities, that are needed to maintain the reliability of the PJM system. All facilities required for interconnection of a generation interconnection project must be designed to meet the technical specifications (on PJM web site) for the appropriate transmission owner.

In some instances an Interconnection Customer may not be responsible for 100% of the identified network upgrade cost because other transmission network uses, e.g. another generation interconnection or merchant transmission upgrade, may also contribute to the need for the same network reinforcement. The possibility of sharing the reinforcement costs with other projects may be identified in the Feasibility Study, but the actual allocation will be deferred until the System Impact Study is performed.

Study estimates do not include the feasibility, cost, or time required to obtain property rights and permits for construction of the required facilities. The project developer may be responsible for the right of way, real estate, and construction permit issues. For properties currently owned by Transmission Owners, the costs may be included in the study.

## **General**

Galetto Realty Company, LP the Interconnection Customer (IC), has proposed a 1.34 MW energy only solar powered generating facility to be located in Vineland, New Jersey. PJM studied W4-090 as a 1.34 MW injection into the Atlantic City Electric (ACE) system at the City of Vineland's West Vineland 69kV substation. The project was evaluated for compliance with reliability criteria for summer peak conditions in 2014. The proposed in-service date is June 1, 2011.

### **Point of Interconnection**

W4-090 will interconnect with the Atlantic City Electric (ACE) transmission system through the existing Points of Interconnection between ACE and the Vineland Municipal Electric Utility (VMEU) system (see Attachment 1).

### **Direct Connection Requirements**

#### **Transmission Owner (ACE) Scope of Direct Connection Work**

The ACE scope of work and estimated costs for the direct connection facilities is as follows:

There are no additional Attachment Facilities required for the interconnection of W4-090 through the VMEU electric system to the Atlantic City Electric system.

#### **Interconnection Customer Scope of Direct Connection Work**

The Interconnection Customer (IC) has assumed full responsibility for the design and construction of all facilities associated with the W4-090 generating facility on the IC side of the POI. The IC will interconnect W4-090 with the ACE system through the existing Points of Interconnection between ACE and the Vineland Municipal Electric Utility (VMEU) system.

The IC will be required to install metering and telemetry equipment to provide revenue metering and real-time telemetry data to PJM. The requirements for this equipment are listed in Appendix 2, Section 8 of Attachment O to the PJM Tariff, as well as PJM Manuals 01 and 14D. Protective relaying and metering design and installation must comply with the Atlantic City Electric Applicable Standards.

### **Transmission Network Impacts**

Potential transmission network impacts are as follows:

#### **Generator Deliverability**

*(Single or N-1 contingencies for the **Capacity** portion only of the interconnection)*

None

#### **Multiple Facility Contingency**

*(Double Circuit Tower Line, Line with Failed Breaker and, Bus Fault contingencies for the **Full** energy output.*

None

#### **Contribution to Previously Identified Overloads**

*(This project contributes to the following contingency overloads, i.e. "Network Impacts", identified for earlier generation or transmission interconnection projects in the PJM Queue)*

None

#### **Short Circuit**

None

#### **Stability Analysis**

Not required due to project size.

### **New System Reinforcements**

*(Upgrades required to mitigate reliability criteria violations, i.e. “Network Impacts,” initially caused by the addition of this project’s generation)*

None

### **Contribution to Previously Identified System Reinforcements**

*(Overloads initially caused by prior Queue positions with additional contribution to overloading by this project.)*

None

### **Potential Congestion due to Local Energy Deliverability**

*(PJM also studied the delivery of the energy portion of the surrounding generation. Any potential problems identified below are likely to result in operational restrictions to the project under study. The developer can proceed with Network Upgrades to eliminate the operational restriction at their discretion by submitting a Transmission Interconnection Request. Note: Only the most severely overloaded conditions are listed below. There is no guarantee of full deliverability for this project by fixing only the conditions listed in this section. With a Transmission Interconnection Request, a subsequent analysis will be performed which analyzes all overload conditions associated with the identified overloaded element(s). As a result of the aggregate energy resources in the area, the following violations were identified:*

These are **not** required reliability upgrades.

None

# Attachment 1

